The inequality has a contrary sign to the inequality of the same argument in the tides of the ocean.

April 1, 1841.

The MARQUIS of NORTHAMPTON, President, in the Chair.

Bartholomew Parker Bidder, Esq., and Julian Jackson, Esq., were balloted for, but not elected into the Society.

The following letter, addressed to the President, was read:—

"4, Trafalgar Square,
London, March 25th, 1841.

"My Lord,—I have the honour of transmitting to Your Lordship for presentation to the Royal Society, an original portrait of *Sir Isaac Newton* by *Vanderbank*, a Dutch painter of some note in that age.

"This picture has now been many years in my possession, and the tenure by which I have kept it (as a collateral descendant of so illustrious a man) was too flattering not to have been a source of great personal gratification.

"But I consider such a portrait to belong of right to the scientific world in general, and more especially to that eminently distinguished Society of which Newton was once the head, and which is now so ably presided over by Your Lordship.

"I have, therefore, to request Your Lordship will do me the honour to present this original portrait of Sir Isaac Newton to the Royal Society in my humble name.

"Accident having destroyed some of the papers of my family, I am unable of myself to trace the entire history of this portrait, but I believe more than one member of the Royal Society is competent to do so, and it is well known to collectors; and a small mezzotinto engraving of it was published about forty years ago. It was painted the year before Newton died, and came into the family of the celebrated Lord Stanhope, who left it by his will to my grandfather, the late Dr. Charles Hutton, a distinguished member of the Royal Society, expressly on the well-authenticated account of that eminent mathematician having been remotely descended from Sir Isaac Newton, in the following way, as I find on a family manuscript; viz. 'that the mother of the well-known James Hutton and the mother of Dr. Charles Hutton were sisters; and the grandmother of James Hutton and the mother of Sir Isaac Newton were also sisters.'

"I have ever considered this very distant connexion with so great a man should not be an inducement to lead me into any but casual mention of the circumstance, that I might avoid the imputation of a vain boast; nor would it have been brought forward now, except

to explain the cause by which this portrait came into the possession of an individual who is happy in relinquishing it to grace the Hall of Meeting of the Royal Society.

"I have the honour to subscribe myself,
"Your Lordship's very obedient humble Servant,
"CHARLES VIGNOLLES."

"*The Right Honourable the Marquess of Northampton,*
&c. &c. &c.
President of the Royal Society."

The following papers were read, viz.—

1. "A Meteorological Journal for 1840, kept at Allenheads, Northumberland, with a few remarks on the Rain-gauge." By the Rev. W. Walton, F.R.S.

The author shows that if the mouth of a rain-gauge be placed in any plane which is not perfectly horizontal, the results will be liable to inaccuracy, whatever may be the direction in which the rain falls. He thinks that, on many occasions, the drops of rain diminish in their size during their descent on entering warmer regions of the atmosphere, so as finally to disappear.

2. "The Scholar's Lute among the Chinese." By — Lay, Esq. Communicated by S. H. Christie, Esq., Sec. R.S.

The Kin, which is the stringed instrument here described, was the one played upon by Confucius and the sages of antiquity, and is therefore held sacred by men of letters. It is made of the Woo-tung, or *Dryandria cordifolia*. It is convex above and plane below, and is wider at one end than at the other; it has two quadrangular apertures in the plane surface, which open into as many hollows within the body of the instrument: and it is furnished with seven silken strings of different diameters, which pass over the smaller end, and are distributed between two immovable pegs below. A bridge within a short distance of the wider extremity gives these strings the necessary elevation and a passage to the under surface, where, by means of a row of pegs, they are tightened or relaxed at pleasure. The length of the sounding-board is divided by thirteen studs of nacre, or mother-of-pearl, as a guide for the performer; and they are placed so that the length of each string is bisected, trisected, &c., that is, divided into aliquot parts as far as the eighth subdivision, with the omission of the seventh, the number of sections being represented by the arithmetical series

2, 3, 4, 5, 6, 0, 8.

Thus the intervals, or magnitudes of the different tones sounded by this instrument, do not accord with those produced on our violin, but agree more with the old Scotch music. The study of this instrument, and the art of playing upon it, are rendered extremely difficult by the complexity of the Chinese notation of written music, which leads to frequent omissions and blunders. Thus every air which a Chinese plays has cost him the labour of many months to learn; and so tiresome is this acquisition, that the author has heard